Appendix I

Examples of Benefits of Using Sector-Based Approaches to Solve Environmental Problems Within Agency Core Functions -- How Do They Differ From Other Approaches?

Issues/Problems to be Resolved Within Agency Core Functions	Solving With a Sector Approach with Stakeholder Involvement	Solving With a Multi-media/Integrated Sector Approach	Solving with a Single-Media Sector Approach	Solving Without a Sector Approach
Permitting. Small businesses must get permitted by the states. Permits are needed to assure compliance. Obtaining permits is a costly process for small businesses and an administrative burden for states because of large number of smaller entities.	Small business stakeholders can provide input into permit program development based on their expertise and knowledge of what is feasible. Because these small businesses are often located in neighborhoods, involvement of local environmental and community interest groups can ensure that local issues are addressed in any new permitting program.	By focusing on sectors dominated by small businesses, such as dry cleaners and printers, states can devise multi-media self-certification programs specific to a sector. Businesses can self-certify that they are in compliance with all applicable media requirements.	A single media approach would require a small business to go through several certification processes, one for each media program that applies. This is less efficient than a multi-media approach.	Without a sector approach, such a program would be difficult to implement because a generic self-certification program could not be specific enough to be useful in outlining requirements.

Issues/Problems to be Resolved Within Agency Core Functions	Solving With a Sector Approach with Stakeholder Involvement	Solving With a Multi-media/Integrated Sector Approach	Solving with a Single-Media Sector Approach	Solving Without a Sector Approach
Rulemaking. Separate Agency media programs must write rules to control pollutant emissions. Separate rules could mean pollutant transfer from one media to another.	By engaging stakeholders early in the rulemaking process, i.e., at the information gathering stage, the Agency can get a comprehensive picture of various stakeholder interests to understand whether rulemaking is actually warranted and, if so, what issues the rulemaking should address aside from those driven by statute.	If rules are impacting a particular sector, a coordinated effort among the different media program offices (air, water, waste) will result in efficiencies during the rulemaking process (e.g., information gathering, data analysis, responding to comments from impacted sector) and will result in a more comprehensive rule, helping to avoid pollutant transfers by sector from one media to another.	A sector-specific rule will consider industry-specific issues, but separate media rulemakings could result in inefficient data gathering/ analysis, potential missed opportunities for P2, potential transfer of pollutants from one media to another, and added costs of compliance for the sector (e.g., with recordkeeping/ reporting requirements).	A generic, one-size-fits-all approach could overlook sector-specific factors that would result in a more effective solution to controlling emissions.

Issues/Problems to be Resolved Within Agency Core Functions	Solving With a Sector Approach with Stakeholder Involvement	Solving With a Multi-media/Integrated Sector Approach	Solving with a Single-Media Sector Approach	Solving Without a Sector Approach
Enforcement & Compliance Assurance. Relying solely on traditional enforcement approaches for assuring compliance with environmental regulations can present problems for the Agency in that it cannot expect to inspect and enforce every facility and thus violations can continue.	Industry can help the Agency understand compliance issues and areas for assistance. Environmental and community groups can raise concerns at the local level that may in fact be part of a national compliance issue. Also at the local level, stakeholder groups can provide input in to designing Supplemental Environmental Projects (SEPs) that a violator agrees to undertake in settlement of an enforcement action that would benefit the local communities.	Multi-media compliance assurance strategies for particular sectors with compliance problems include a mix of carrots (compliance assistance and incentives) and sticks (traditional enforcement) that the Agency believes will result in higher compliance rates.	Use of single-media strategies for a particular sector would be inefficient for both the Agency and the regulated entity. Regulated sectors prefer to receive compliance assistance from a multi-media perspective.	Employing a non-sector approach will result in missed opportunities for understanding a sector and why that sector is having trouble complying. A media approach would not be as focused or defined as a sector approach.

Issues/Problems to be Resolved Within Agency Core Functions	Solving With a Sector Approach with Stakeholder Involvement	Solving With a Multi-media/Integrated Sector Approach	Solving with a Single-Media Sector Approach	Solving Without a Sector Approach
Regional Activities. Regions may be dominated by environmental problems that are not necessarily amenable to solutions developed at the national level.	Stakeholder involvement at the Regional/local level is important to get resident understanding and framing of issues. Local/regional businesses, interest groups, and communities can bring a local perspective that may not otherwise be apparent to the Agency.	Environmental problems at a local/regional level are often related to an economic sector dominant in that area (e.g., animal feeding operations, mining operations), thus making it amenable to a sector-based solution. A multi-media sector approach results in a more comprehensive resolution. A sector approach can be combined with community or place-based environmental programs.	A single media sector approach may work in some situations where the problem is related to regulation in only one media; however, such an approach can result in missed opportunities for P2 or other voluntary efforts on behalf of the industry.	Attacking local problems without a sector perspective makes sense if the problems cannot be linked to a particular industry; however, trying to resolve a local media pollution problem (e.g., a contaminated river) without a sector perspective may result in a missed opportunity to identify the major contributors to the pollution.
Building Voluntary Partnerships. The Agency use of traditional regulatory approaches for achieving environmental protection do not necessarily allow for flexible solutions and are no longer the sole answer to achieving protection.	Voluntary partnerships are built on a foundation supported primarily by cooperative and willing sector participants.	The Agency is finding success by building collaborative voluntary partnerships with sectors to achieve multi-media environmental protection. For example, the PBT Initiative seeks to eliminate the presence of PBT chemicals through the use of voluntary partnerships with the sectors that are most responsible for the presence. A multi-media approach assures all avenues of the pollution are considered.	In addition to missing avenues for pollutant transfer, a single media approach to a voluntary effort may result in inefficiencies in Agency actions if separate programs are trying to reduce the presence of the same chemical. Regulated entities within a sector may become annoyed when different voluntary Agency programs approach the same sector multiple times.	A voluntary approach works best when there is a sector (e.g., trade association) that is willing to partner with the Agency and that sector represents a willing constituency.

Issues/Problems to be Resolved Within Agency Core Functions	Solving With a Sector Approach with Stakeholder Involvement	Solving With a Multi-media/Integrated Sector Approach	Solving with a Single-Media Sector Approach	Solving Without a Sector Approach
Research and Development. Some solutions to environmental problems do not currently exist and thus require further research and development.	Communities and environmental groups may raise concerns regarding local environmental problems, such as detecting pollutant releases to air and ground water, that can spur and focus technology research and innovation. Industry representatives and academic institutions can participate in R & D.	Conducting research to identify technologies and tools to improve environmental performance within a particular sector can help focus Agency efforts on industries that may be having major impacts on the environment. A multi-media perspective assures that technologies improving performance in one media are not impacting another.	Single media research perspectives may be appropriate given the nature of the problem in a particular sector. Opportunities could be missed, however, for crafting solutions that could address more than one media.	Research and development of new technologies may not necessarily require a sector approach if the solution can be applied to more than one sector; however, a sector approach does help the Agency focus on industry-specific problems that a media focus might not have revealed.
International Activities. Solutions to environmental problems are not necessarily confined to the boundaries of the United States. Pollutants can travel across country borders and globally, thereby requiring an international perspective.	The success of many international activities, such as restoring and maintaining the Great Lakes ecosystem, depends on support from key stakeholders such as industry, U.S. and Canadian states, provinces, Tribes, local governments, and communities.	Program offices working togther with other countries can result in development of global solutions to environmental problems through a sector-based perspective. International information and technology transfer on pollution prevention and environmental management practices in specific industries can help assure a consistent approach is taken in all countries to avoid pollutant travel.	Working with other countries on sector-specific issues can be difficult given travel distances and differences in language, technologies, and different sector representatives. It is far more efficient, therefore, for the Agency to speak with one voice, representing all programs, rather than try to coordinate separate program interactions with a country.	A single media approach to solving these problems may miss opportunities to craft international industry partnerships that could share technologies and other opportunities to reduce pollutant generation and transfer.

Appendix II-CSI
Overview of Projects in FY 2000 Sector Action Plan

Continuing CSI Projects

Action A. Implementing Sector-Based Approaches Within Agency Core Functions

Action A(1) ***Permitting*: Work with Regions, states, and tribes to implement sector-based permitting projects.**

CSI-A(1)(a) PrintSTEP. See FY 2000 Action Plan Project Description.

CSI-A(1)(b) Iron and Steel–General Permitting Issues. Under CSI, the Iron and Steel Subcommittee conducted an examination of general permitting issues. The Subcommittee addressed specific interests of industry, regulators, and non-government organizations. A package of 12 permit issues and recommendations was developed to improve the permitting process in all media. Eight of the recommendations submitted to the EPA are being considered within EPA's general permit reform efforts. Two of the recommendations support activities already underway. As a result of the remaining two recommendations, EPA will be developing consolidated guidance on witnessing certain air testing, and a direct final rule amending the New Source Performance Standards (NSPS) to allow daily observations of visible emissions from electric arc furnace shops went into effect May 3, 1999.

CSI-A(1)(c) Iron and Steel–Computerized Permitting System. The Office of Water has begun an inventory of the existing computerized permitting programs. After it collects all the existing programs from the states, it will determine which of the available programs are useful. Based on this analysis, the Agency will determine whether the current available programs are sufficient, or if a new system needs to be developed.

Action A(2) ***Rulemaking*: Regulatory changes to facilitate compliance, coordinated rulemakings**

CSI-A(2)(a) Computers and Electronics-CRT Recycling. The subcommittee proposed revisions to RCRA regulations that will reduce federal regulatory burdens and thus remove barriers to the recycling of CRTs. The rule change would allow CRT glass to be recycled into new glass by defining management practices for facilities that collect, process, or transport CRTs. EPA expects to propose a rule in April 2000 that will greatly streamline the requirements for managing CRTs while retaining appropriate controls to protect human health and the environment. The rule also will clarify that once the CRT glass is processed such that it is usable as a raw material in CRT glass manufacturing, it is not subject to hazardous waste regulations.

CSI-A(2)(b) Computers and Electronics-Zero Wastewater Discharge System. The subcommittee studied the regulation of zero wastewater discharge systems. The goal of the work group was to determine whether the interpretation and application of the RCRA treatment, storage, and disposal facility (TSDF) permitting exemptions and exclusions by EPA and state permitting officials present a barrier to the use of "cleaner, cheaper, and smarter" options for pollution prevention and recycling. EPA program and regional offices and states are continuing to explore and assess alternative approaches toward addressing regulatory issues surrounding zero wastewater discharge systems. EPA has agreed to play a leadership role in working

toward a solution to this issue that encourages the use of such state-of-the-art water conservation/reuse technologies and related pollution prevention practices in ways that are protective of human health and the environment. OSW and OW expect to issue regulatory guidance on zero wastewater discharge in late FY 2000.

CSI-A(2)(c) Iron and Steel–Stakeholder Involvement in Rulemaking. EPA is conducting a stakeholder involvement in rulemaking survey and is assessing where improvements can be made. A Regulatory Steering Committee Workgroup has been formed to assist in the planning and implementation process.

CSI-A(2)(d) Auto manufacturing–Input on Vehicle Coating Rulemaking. Rulemaking data collection was completed in May 1999. Several questions on vehicle surface area were included in the survey. The Agency is using this information along with VOC and HAP emissions data to evaluate the mass per unit area approach and compare it to other approaches. The schedule for this rulemaking proposal is by March 2001 and the final rulemaking by March 2002.

CSI-A(2)(e) Metal Finishing–RCRA Metal Finishing F006 Wastewater Sludge Project. This project is addressing the RCRA Definition of Solid Waste within the metal finishing context. The goals of this project include: 1) to complete an objective study of the composition, quantities, and characteristics of metal finishing wastewater treatment sludges; 2) to reduce the generation of toxicity of metal finishing wastewater treatment sludges through pollution prevention measures; 3) to improve the recyclability of metals contained in the sludge in a cheaper, smarter fashion, while ensuring no transfer of hazards to other environmental media; and 4) to reduce the volume of sludges destined for land disposal. Recent milestones for this group include a proposed RCRA rule change to extend (to 180 days) the accumulation requirements for F006 metal finishing waste to promote on-site metals recovery and recycling of waste. EPA is in the process of assessing public comments on the proposal. The first phase of the F006 Wastewater Sludge Project, which was a benchmarking analysis of F006 constituents using national and regional sampling data, is complete. A workgroup is assessing the results of the benchmarking study to determine next steps and to improve the utilization goals of the Strategic Goals Program.

CSI-A(2)(f) Computers and Electronics–Sulfuric Acid Recycling. Sulfuric acid recycling by semiconductor manufacturers is inhibited by perceived RCRA regulatory barriers. The subcommittee launched a project to find ways to eliminate perceived RCRA barriers to sulfuric acid recycling. EPA staff discovered that there may be viable options for recycling the acid under current RCRA regulations, making regulatory or policy changes unnecessary. However, they found that the circumstances under which sulfuric acid from semiconductor manufacturers can be recycled without being a RCRA hazardous waste need to be clarified.

Action A(3) ***Enforcement and Compliance Assurance*: Implement sector activities to achieve a higher level of efficiency in enforcement and compliance within priority sectors.**

CSI-A(3)(a) Computers and Electronics–CURE. The Texas Natural Resources Conservation Commission (TNRCC) developed the CURE process for improving the reporting requirements of the computers and electronics industry in Texas. CURE is being designed to provide easier access to

environmental data for primary users, including reporting companies and their workers, regulating and responsible agencies at all levels of government, NGOs and local organizations, and the general public.

Stakeholders have identified key data elements to be included in a single reporting form, and they have developed a demonstration-scale prototype of the CURE system. Pilot tests have been conducted to test the use of the CURE prototype, including submission of and access to CURE data. The CURE has caught the interest of eight other states who in March proposed to the EPA a cross-state initiative. This initiative was also discussed in the Spring 1999 at an EPA-ECOS meeting in Washington, DC, and in the Summer 1999 at an ECOS meeting in Minneapolis. The CURE report was released in March 1999, and is located on the TNRCC Web Site at www.tnrcc.state.tx.us/oprd/cure/index.html.

CSI-A(3)(b) Iron and Steel–Non-Witness Testing. OAQPS has prepared draft guidance for assessing data from non-witness emission test programs at iron and steel facilities (conducted for purposes other than compliance). Internal and external Agency review has been completed, and the Agency expects to release the final document in early 2000.

CSI-A(3)(c) Petroleum Refining–RAIRS. The Refinery Air Information System (RAIRS) Project (formerly "One-Stop Reporting and Public Access Project") was initiated to identify and recommend modifications to existing air reporting requirements that are duplicate and/or obsolete. The project addresses community needs for increased understanding of and access to environmental information. The goal of the project is to enhance utility of air emission reports by all regulators, the regulated industry, and the public. A consolidated air emissions reporting system was completed in August 1998. The revised reporting system was tested at a pilot refinery, Marathon Oil Refinery, in Texas City, Texas, in September 1998. The purpose of the pilot was to compare the resource burden of existing reporting requirements with the revised system. Preliminary evaluation estimates indicate that the reporting burden was reduced by approximately 100 hours annually.

CSI-A(3)(d) Metal Finishing–National Metal Finishing Resource Center. The National Metal Finishing Resource Center (NMFRC) provides "one-stop" access for metal finishers and others to up-to-date information about technical and compliance-related issues that affect their operations. The goal of the Center is to give direct, "customer oriented" assistance to metal finishers and to help them reduce pollution, promote manufacturing efficiency, and achieve full compliance with all applicable environmental laws and regulations. The NMFRC was developed as a public/private partnership between EPA, National Institute of Standards and Technology (NIST), and the metal finishing industry. The NMFRC became fully operational in October 1996 and is available to provide information on-line via the Internet on state and federal regulations, cost/benefit data on pollution prevention methods, technology updates, and opportunities for more in-depth technical assistance. In 1998, the NMFRC assumed a new role to assess the progress of facilities participating in the Strategic Goals Program and to provide technical assistance to participating firms. To access more information on NMFRC visit the Web site at www.nmfrc.org.

CSI-A(3)(e) Metal Finishing–Tier 3 Firms. The Metal Finishing Tier 3 Project Team completed a series of case studies of representative Tier 3 facilities in Connecticut, Massachusetts, and California. The report identifies factors that lead certain metal finishers to become Tier 3 Firms, and offers possible transition strategies for these facilities. In 1998, EPA Region 1 and Rhode Island Department of Environmental Management (DEM) completed a prototype guidance booklet to provide owners of Tier 3 firms with detailed explanations about the issues they face and the local resources that are available to help them. This prototype

guidance booklet is currently being modified for use in Massachusetts and other states to take into account the varying state-to-state resources. Copies will be available on the Strategic Goals Program Web site in the near future at www.strategicgoals.org.

CSI-A(3)(f) Metal Finishing–Tier 4 Facility Enforcement Project. The objective of this project is to develop a targeted enforcement program that identifies Tier 4 firms and takes appropriate action against them. Tier 4 firms are chronically out of compliance, don't actively seek ways to be in compliance, and generally escape enforcement attention because of their small size and transient nature.
A multi-stakeholder team developed a work plan for the project. In 1998, regional stakeholder teams developed pilot efforts in several areas to test new enforcement approaches for Tier 4 firms. In 1999, several local SGP groups began work on developing targeted enforcement strategies, and reviewing information sources to identify chronic non-compliers and "rouge" firms.

CSI-A(3)(g) Iron and Steel - Supplemental Environmental Projects. The Iron and Steel subcommittee worked with EPA's Office of Enforcement and Compliance Assurance (OECA) to identify ways to creatively use Supplemental Environmental Projects (SEPs) to support community development, facilitate additional Brownfields cleanup, increase public participation in the use of SEPs, and improve compliance. OECA recently completed an *Action Plan for Innovation*. The Report states that OECA will involve communities in the development of SEPs. An OECA workgroup effort is underway to develop guidance for establishing a process for involving communities early in the settlement of an enforcement action so they can provide meaningful input on SEPs. OECA will issue the guidance by March 2000. The *Action Plan for Innovation* also states that OECA will publicize innovative SEPS; e.g., innovative projects to prevent pollution, encourage citizen monitoring, or provide training and technical support to the regulated community. OECA will develop a bulletin by February 1, 2000.

Action A(4) ***Solving Regional Problems*: implement sector-based projects to address regional priority problems.**

CSI-A(4)(a) Iron and Steel–Liaison Network. See FY 99 Action Plan Project Description.

Action A(5) ***Building Voluntary Partnerships*: partner with private sector to improve environmental performance.**

CSI-A(5)(a) Computers and Electronics-BOLDER. The subcommittee worked with fire departments and computer and electronics facilities in Phoenix and Chandler, Arizona; Maricopa County; and other local communities to develop computer software that consolidates multiple emergency response plans into one document. The BOLDER software is a planning tool that consolidates over 500 pages of federal, state and local Agency response plans into one 30-page plan that is easy to access, understand, and implement. BOLDER gives fire departments and other emergency response agencies instant electronic access to the emergency plans of computers and electronics manufacturing facilities. The BOLDER planning tool was completed in 1998 and is currently available in the Phoenix area. The workgroup has beta tested BOLDER with the Chemical Emergency Preparedness and Prevention Office in Corpus Christi, Texas, and will explore electronic submission of the One Plan requirements. Continuing work with the National Response Team is needed to realize the full potential of BOLDER. For more information on BOLDER, visit the Web site at www.chemicalspill.org.

CSI-A(5)(b) Computers and Electronics-Performance Track. The subcommittee focused on developing a performance track program that offers companies or facilities regulatory flexibility or other incentives to encourage them to improve their environmental, health, and safety performance. The Office of Policy and Reinvention is convening an internal EPA workgroup to carry out the development of a "performance track." In its Innovations Task Force Report, *Aiming for Excellence*, EPA has committed to develop a performance track to motivate and reward top environmental performance. The workgroup will help develop an approach for EPA's performance track strategy. In doing so, the workgroup will be involved in a number of stakeholder discussions and will take those discussions into account when formulating options.

CSI-A(5)(c) Automobile Manufacturing-Life Cycle Management. The objective of this project was to develop principles and strategies for the application of life-cycle management in the automobile manufacturing sector as a means of further reducing environmental impacts in an economically efficient manner. The team's goal was to demonstrate the principles and strategies of life-cycle management in automotive manufacturing through manufacturer/supplier partnerships in a way that would be applicable and beneficial to the whole sector. The Office of Policy and Reinvention (OPR) is facilitating Agency discussions on data needs to support LCM concepts and promote opportunities for its use. OPR in conjunction with DfE is currently investigating the potential of using LCM concepts in a Project XL application. DfE and OPR are co-funding a University of Tennessee LCM project with Saturn. The project is in the preliminary stage.

CSI-A(5)(d) Metal Finishing–Strategic Goals Program (SGP). See FY 99 Action Plan Project Description.

CSI-A(5)(e) Metal Finishing–Access to Capital. The metal finishing sector is leading an effort to conduct an analysis of innovative ideas such as environmental insurance and technology verification to support loan decisions that can be of benefit across small business components of sectors. The subcommittee recommended to EPA that it develop an EPA/Small Business Association (SBA) sponsored pilot loan program to help small metal finishers fund facility improvements. The Office of Policy awarded a grant to EPA Region 9's Environmental Finance Center to facilitate meetings and perform analysis for a local multi-stakeholder group. Stakeholder planning meetings were held during the first two quarters of FY 99 to develop the pilot loan program for metal finishers in the Los Angeles area. Current plans anticipate a $2-4 million small business loan program that will be piloted in early 2000. Long-term plans call for replication of this model in other SGP areas and perhaps with other small business sectors.

CSI-A(5)(f) Iron and Steel–Brownfields Redevelopment. The subcommittee developed Guiding Principles for Brownfields redevelopment. The Guiding Principles represent a threshold set of goals that could be applied in a broad sense to any Brownfields strategy. The Subcommittee also created a model statute for creating a community redevelopment authority. The Guiding Principles and Redevelopment Authority are being piloted in Northwest Indiana and Birmingham, Alabama. Project managers are being surveyed to assess which of the Guiding Principles are being implemented and their impact.

CSI-A(5)(g) Iron and Steel–Community Advisory Committee. The subcommittee developed a set of Guiding Principles for developing working relationships between an industrial facility and its surrounding community. It is testing the Guiding Principles at a pilot citizen's advisory committee at Bethlehem Steel's

Burns Harbor facility. The Bethlehem Steel Burns Harbor Plant is the first integrated steel mill to voluntarily establish a Citizens Advisory Committee (CAC). The Bethlehem CAC includes area residents, representatives of environmental groups, the educational community, federal, state, and local government officials (including the EPA and National Park Service), and Bethlehem Steel union and management officials. The group has met regularly since November 1996 to advise Bethlehem regarding the improvement of its environmental performance. The CAC has tackled several complex environmental issues including noise, truck traffic, and expediting RCRA corrective action for a former sludge dumping ground so that the area may be reused for wildlife habitat and recreational purposes. EPA awarded a grant to the Bethlehem CAC. The grant identified three key objectives: 1) to evaluate portions of land for possible use as a wildlife habitat and recreation; 2) to develop a formal outreach and education plan; and 3) to investigate innovative environmental performance measures to assess Bethlehem's environmental performance.

CSI-A(5)(h) Metal Finishing–Metal Finishing 2000 Flexible Track Projects. The subcommittee endorsed the concept of an alternative performance "flexible track" for top performing metal finishing facilities. Metal Finishing 2000 is designed to define and test the concept of offering operational flexibility for top environmental performing metal finishing facilities. Under the pilot, industry environmental performance leaders who meet the stakeholder-defined program criteria and pursue pollution prevention will receive operational flexibility. Early lessons learned from the pilots have provided SGP local groups with models for establishing stakeholder groups, identifying benefits for metal finishers, and compliance criteria. Metal Finishing 2000 in Detroit, Michigan, is nearly complete with six companies implementing their individual pollution prevention projects. In Rhode Island, the Narragansett Bay Commission (NBC) has accepted one company into the program, and is providing flexibility from certain regulatory requirements. NBC is evaluating the applications of seven additional firms. NBC also has applied to EPA's Project XL. If accepted, they will be able to offer these metal finishers flexibility from Federal regulatory requirements.

Action A(6) ***Research and Applications of Science*: looking for new pollution prevention and technology solutions.**

CSI-A(6)(a) Petroleum Refining–Equipment Leaks Project. The purpose of the Equipment Leaks Project is to identify alternatives to current leak detection and repair (LDAR) requirements at petroleum refineries to increase regulatory flexibility and cost effectiveness and reduce emissions. The Workgroup conducted a study of equipment leaks at 25 randomly selected refineries. The "Public Data Collection and Analysis Task Final Report" was completed in February 1998 and concluded that there was not a defined universe of chronic leakers. Several technologies have been identified that have the potential to rapidly detect Volatile Organic Compounds (VOC) emissions at refineries. The workgroup has field tested one such technology, a laser imaging system, including side-by side comparison testing with current LDAR methods, at a volunteer refinery in April 1999. The workgroup is coordinating with EPA's Office of Air Quality Planning and Standards and state air regulatory agencies to develop and implement alternative procedures to current LDAR requirements. The Agency is simultaneously moving forward with the regulatory and technology development to ensure that this technology will be able to be utilized when it becomes commercially available.

CSI-A(6)(b) Metal Finishing–Chromium Pollution Prevention Technology Demonstration. The Metal Finishing Research and Technology Workgroup is developing innovative, low-cost technologies to improve the performance of the metal finishing industry and achieve cost-effective pollution prevention results. Multi-stage composite mesh pads and chemical fume suppressants are two new technologies being tested in volunteer metal finishing facilities in the Midwest. The first demonstration phase is complete. The

most promising technologies will now be tested and, if successful, verified for broad marketing and use. Based on the results from the demonstration project, EPA's Office of Air and Radiation is working to make proposed changes to the Chrome Maximum Achievable Control Technology (MACT).

CSI-A(6)(c) Metal Finishing-National Metal Finishing Environmental R&D Plan. See FY 99 Action Plan Project Description.

CSI-A(6)(d) Metal Finishing–Approaching Zero Discharge Demonstration Project. The objective of this project is to promote the commercialization of metal finishing processes that operate at or near zero discharge of toxic pollutants. While it is desirable to seek less toxic alternatives to the substances used in metal finishing, in some cases performance-equivalent substitutes cannot be found for particular processes. In these cases, there are environmental benefits in demonstrating "cleaner" technologies that achieve waste reduction results by approaching zero discharge through improved operational techniques and/or in-process recycling technologies. A detailed work plan has been drafted for demonstrations of up to four pollutant reduction technologies. The demonstrations will be designed to provide technology-specific information on environmental emissions, operation of the technologies, maintenance needs, production throughput, product quality, energy consumption, capital and operating costs, and occupational exposure. Funding has been secured for this project, and it is receiving broad stakeholder support.

CSI-A(6)(e) Metal Finishing–Environmental Technology Verification Project . This project is one of 12 pilots operating under the EPA's Environmental Technology Verification (ETC) program. The ETV Metal Finishing Pollution Prevention (ETV-MF) project's goal is to institutionalize a long-term verification process. Technology categories will initially be drawn from the National Metal Finishing Environmental R&D Plan and later solicited from the pilot's Stakeholder Group. (Also refer to Metal Finishing R&D Plan in the FY 99 Action Plan Project Descriptions.)

Action B. Build management capacity to conduct sector-based environmental protection

CSI-(B)(1) Computers and Electronics–Interagency Coordination on Risk Exposure. The Computers and Electronics Sector's vision for the future includes integrating environmental, health, and safety programs into product design and production processes. An integrated environmental health and safety program would ensure that beneficial changes in one program area (such as the environment) are not to the detriment of other areas (such as safety or health). An interagency planning group, working under the direction of the ONE (OSHA, NIOSH, EPA) Committee, held a workshop on June 17-18, 1999, in Washington, DC, to discuss "Common Sense Approaches to Protecting Workers and the Environment." The goal of the workshop was to improve and increase the coordination among the three agencies (OSHA, NIOSH, and EPA) on occupational and environmental issues. The results of the meeting will be published on EPA's Web site at *www.epa.gov/P2/workshop.htm.* Future endeavors will be determined after the results have been compiled and the senior management of the three Agencies has been briefed.

CSI-B(2) CSI Council– Reinventing Environmental Information. The Reinventing Environmental Information (REI) Action Plan was approved by Administrator Browner in February 1998. Through REI, EPA is adopting formal data standards, providing universal access to electronic reporting, reengineering its nation data systems, and working more cooperatively on information reforms with the states. The Action Plan is available on the Internet at www.epa.gov/rei.

CSI-B(3) CSI Council–Sector Action Plans. The FY 99 Sector-Based Action Plan was endorsed by the CSI Council on October 14, 1998. The Plan presents a multi-year strategy that the Agency will use to encourage a sector approach. Included in the Plan was the creation of the NACEPT Standing Committee on Sectors, which met for the first time April 15-16, 1999, and has had two subsequent meeting in the summer and fall respectively. The new Standing Committee on Sectors assisted with the development of the FY 2000 Sector-Based Action Plan.

CSI-B(4) CSI Council–Data Gaps. From the Spring to the Fall of 1998, the CSI Council provided advice and recommendations to EPA on the various issues related to data gaps. The Council also promoted intensive analysis of data gaps for individual environmental issues. EPA's leadership had also identified the need for better information on data gaps in order to help set priorities in the agency's planning and budgeting process. As a result of the CSI Council's proposal, in December 1998, EPA issued a preliminary report on its strategy to address data gaps. The report presents a mechanism for early public involvement in addressing data gap issues. The report also presents a strategic approach for identifying, setting priorities for, and addressing data gaps.

CSI-B(5) CSI Council–Data Quality. From the Spring through the Fall of 1998, the CSI Council provided advice and recommendations to EPA on the various issues related to data quality. All of the CSI Council recommendations were integrated into the final draft of the Data Quality Strategic Plan that was submitted to the EPA Administrator in late December 1998. It commits the Agency to improving data quality in three ways: 1) by developing quality performance standards for each of its major data systems to track and improve data quality over time, 2) by developing an error correction process to ensure that discrepancies in data are routed to the appropriate data managers, and 3) by establishing customer service performance standards for each major data source to ensure that discrepancies are addressed promptly and appropriately.

Action C. Craft Sector-based Solutions with External Stakeholders

CSI-C(1) Computers and Electronics--Enhanced Public Access. The Computers and Electronics Subcommittee found that a process is needed to ensure that EPA regulatory interpretations or determinations affecting the environmental management practices of the regulated community are compiled and easily accessible to the public, as appropriate. EPA is implementing a system to provide easy public access to regulatory interpretations on the Internet. The Agency-wide Task Force has now identified about 7,000 documents, approximately half of which are in paper version only. The Agency is in the process of completing the development of metadata on all of these documents and converting the paper documents to electronic format. An extensive quality assurance effort will then be required to review the metadata and converted documents for accuracy. This project will be moved to the new Information Office, and the next phase, the outreach effort, will be developed in coordination with that new office.

CSI-C(2) CSI Council–Stakeholder Action Plan. See FY 99 Action Plan Project Description.

CSI-C(3) Computers and Electronics–Electronic Product Recovery and Recycling Roundtable. The EPR2 Roundtable brings together 23 interested stakeholders representing original equipment manufacturers; recyclers; reuse organizations; nongovernmental organizations; federal, state, and local government agencies; retailers; and academics to address issues raised as a result of the growing quantity of used computer and electronics equipment. The Roundtable projects are designed to help identify and prioritize ways to overcome market, economic, regulatory, administrative and institutional barriers to the effective management of

electronic equipment throughout its life cycle. An EPR2 Conference has been held for the past two years as a forum for exchanging information and technologies for developing practical, innovative strategies for managing end-of-life electronic equipment.

Appendix II-99
Overview of Projects in FY 2000 Sector Action Plan

Continuing FY 99 Projects

Action A. Implementing Sector-Based Approaches Within Agency Core Functions

Action A(1) ***Permitting*: Work with Regions, states, and tribes to implement sector-based permitting projects.**

FY 99-A(1)(a) Pollution Prevention in Permitting Program. EPA is continuing to pilot the use of a sector-based approach in the Pollution Prevention in Permitting Program (P4), which seeks to incorporate operational flexibility and pollution prevention into permits. Facility-specific P4 permits will serve as models for other companies within a sector. These pilots also will provide critical input to the development of future permit-compatible regulations applicable to the sector. The first such effort is currently being developed in conjunction with the pharmaceutical industry. By linking P4 into both Title V permits and MACT (Maximum Achievable Control Technology) standard development, EPA can ensure alignment between the Title V permit framework (which incorporates pollution prevention and operational flexibility) and new applicable requirements that the sector will be required to address. With this alignment, the MACT standard can enhance, rather than limit, operational flexibility and pollution prevention.

FY 99-A(1)(b) Massachusetts Environmental Results Program. EPA is continuing to work with the Massachusetts Environmental Results Program (ERP) through Project XL to explore permit innovations focused on small business. The ERP offers plain language workbooks, compliance assistance, and self certification opportunities that promote pollution prevention and environmental accountability in lieu of traditional state-issued permits.

FY 99-A(1)(c) Sector-Based Permit Reform Projects. Through this project, the Office of Policy and Reinvention is working with sectors in the Sustainable Industry Program to develop sector-based permit reform projects, in consultation with relevant EPA program offices, regions, and outside stakeholders. The long-term objective of this project is to expand the Sustainable Industry diagnostic process to address sector-specific permit issues and opportunities, leading to pilot projects that test innovative approaches such as sector-wide model permits, special permitting provisions for innovative technologies, and/or the development of sector-specific technical guidance.

Action A(3) ***Enforcement and Compliance Assurance*: Implement sector activities to achieve a higher level of efficiency in enforcement and compliance within priority sectors.**

FY 99-A(3)(a) OECA Sector Strategies. The Office of Enforcement and Compliance Assurance (OECA) selects certain sectors as priorities for compliance and enforcement activities. OECA works with the Regions, states, and tribes to develop sector activities to enhance commitments for priority sectors. These sector strategies seek to assure compliance by combining compliance assistance, incentives, monitoring, and enforcement in a more strategic manner. This includes providing training and

compliance guides to help sectors understand new regulations; sending letters to facilities encouraging them to perform audits and acknowledge areas of noncompliance in exchange for reduced penalties under the EPA audit policy; and conducting inspections with enforcement actions with full penalties if appropriate. For FY 99, OECA began implementing strategies for the following eight sectors: chemical preparations, coal fired utilities, concentrated animal feeding operations (CAFOs), industrial organic chemicals, iron and steel, metal services, petroleum refining, and primary non-ferrous metals. In FY 2000, the Agency will continue with current sector strategies, and it will design new ones that incorporate all of the compliance assurance tools to bring regulated entities into compliance.

(A)(4) *Solving Regional Problems*: implement sector-based projects to address regional priority problems.

FY 99-A(4)(a) Metal Finishing Strategic Goals Program. In FY 2000, EPA will continue to implement and refine the National Metal Finishing Strategic Goals Program (SGP), the Agency's first-of-its-kind sector-wide voluntary stewardship program. The program has a pollution prevention emphasis that includes facility-based "better-than-compliance" performance targets for resource conservation and waste reduction. The SGP also includes industry-wide objectives for compliance and goals achievement, plus a multi-stakeholder action plan tailored to the industry that creates incentives, provides tools, and removes barriers to facility achievement of the goals. Program participation by the end of FY 99 includes most EPA regulatory and regional programs, over 300 metal finishers, 18 states, nearly 50 local governments, and local environmental groups. Stakeholder commitments in FY 2000 include continued implementation of this sector-based program in key locations around the country; ongoing development of innovative tools and technologies to help SGP participants; pursuit of targeted regulatory changes to help with goals achievement; and measurement of participant progress toward facility goals and other Action Plan commitments. Information on the SGP is accessible via the Sustainable Industry Web site or at www.strategicgoals.org.

In FY 99, the Agency's Sector Action Plan highlighted EPA Region 3's (Philadelphia) work with the state of Pennsylvania's Department of Environmental Protection (PADEP) and four Publicly Owned Treatment Works (POTWs) in the state on the metal finishing Strategic Goals Program (SGP). In FY 99, the metal finishing SGP was conducted in a total of seven EPA regions (Regions 1-6 and 9). In FY 2000, the SGP will be implemented in all 10 EPA regions. For a more complete discussion of the SGP , see the write-up under "Building Voluntary Partnerships."

FY 99-A(4)(b) Region 4 POTW Initiative. EPA Region 4 (Atlanta) is working with the states and Publicly Owned Treatment Works (POTWs) to initiate a Management, Operation and Maintenance (MOM) project, which is designed to significantly reduce the number of sanitary sewer overflows (SSOs) at POTWs through the use of the Self-Audit/Self-Disclosure policy.

FY 99-A(4)(c) Region 9 Agriculture Initiative. EPA Region 9 (San Francisco) is working with segments of the agriculture sector and the state of California to address non-point source problems. The initiative grew out of the Region's Comparative Risk project (1990), which found that agriculture's pollutant dischargers and degradation of habitats remain the largest unregulated sources of risk to human and ecological health.

FY 99-A(4)(d) Region 10 Mining Initiative. Region 10 (Seattle) is working with three states (Washington, Idaho, and Oregon) to consolidate into a common database a comprehensive inventory of Inactive and Abandoned Mine Lands (AML) and establish a process for prioritizing site investigation and cleanup projects.

A(5) ***Building Voluntary Partnerships*: partner with private sector to improve environmental performance.**

FY 99-A(5)(a) Sustainable Industry Program. In FY 2000, EPA will continue its Sustainable Industry (SI) Program. Through this program, the Agency works in partnership with willing industries to find the most effective and innovative ways to improve environmental performance while easing the burdens of regulation. The program uses a unique diagnostic process that focuses on issues sector-wide and across all media. EPA teams with business managers and other stakeholders to "learn from the bottom up" about the factors that directly affect environmental management decisions. Based on this knowledge, EPA tests incentives and tools (drivers) that can promote improved compliance and "beyond compliance" actions by businesses acting in their own interest. EPA also tests ideas to overcome barriers that stand in the way of improved, cost-effective environmental protection. EPA then works with stakeholders to develop projects that will bring about long-term changes in government and industry programs--changes that permanently address the drivers and barriers for each sector. At the end of FY 99, EPA has seven industries at various stages in this process, foremost among them the Metal Finishing Strategic Goals Program. Other participating industries are specialty-batch chemical manufacturing; metal foundries and die casting; meat processing; shipbuilding and repair; photo processing; and travel and tourism. In FY 2000, EPA will move these sectors through the process toward the creation of the type of multi-media stewardship approach adopted by the metal finishing sector. Information on Sustainable Industry is accessible at www.epa.gov/sustainableindustry.

FY 99-A(5)(b) Design for the Environment Program. Under the Design for the Environment (DfE) Program, EPA will be completing the technical analysis for existing partnerships with the printing industry, computer and electronic components manufacturers, automotive refinishers, and industrial laundry formulators. Through the DfE Garment & Textile Care Initiative, DfE continues to work with the dry cleaning industry to evaluate alternative technologies that are based upon liquid CO_2 and wet cleaning instead of technologies that rely upon perchloroethylene. DfE has worked with the Federal Trade Commission on garment care labeling to inform customers of other effective cleaning choices. DfE also will continue with three new sector initiatives launched in FY 99. These include (1) a chlorinated solvents substitutes assessment for adhesives used in the foam furniture industry, (2) a " Greening the Supply Chain Pollution Prevention Partnership" with the Saturn Corporation and all of Saturn's automotive parts suppliers to provide technical assistance on understanding environmental issues related to the automotive parts suppliers, many of which are smaller independent businesses; and (3) exploring new technologies in the paints and coatings sector in partnership with the Iowa Waste Reduction Center (IWRC). In FY 2000, DfE will be starting up both small and moderate size new sector partnership assessments in the following areas: the manufacture and use of carbonless copy paper, machine tool and metal working fluids, and a new formulator's project focusing on the dye and pigment industry.

A(6) ***Research and Applications of Science*: looking for new pollution prevention and technology solutions.**

The Office of Research and Development (ORD) will continue to conduct research and verification processes to identify innovative pollution prevention technologies and tools that have the potential to significantly improve environmental performance within a sector, while reducing costs. Examples include:

FY 99-A(6)(a) National Metal Finishing R & D. EPA will implement the National Metal Finishing Environmental Research and Development Plan that was developed under the CSI, including development of risk characterization techniques.

FY 99-A(6)(b) Science to Achieve Results/Environmentally Benign Solvents Research. EPA will continue research to identify environmentally benign solvents, such as supercritical water and carbon dioxide, for application in the chemical, coatings, fabric cleaning, and other sectors that now use organic solvents. ORD will work with program and regional offices to integrate results into regulatory, compliance, and other Agency activities.

A(7) ***International*: incorporate sector-based approaches into international activities.**

FY 99-A(7)(a) Global and Cross-Border Environmental Risks. EPA's Office of International Activities (OIA) will continue to work with regions and program offices to develop sector-based activities to assist in achieving the Agency's strategic goal to reduce global and cross-border environmental risks. Sector-based projects are planned to enhance international cooperation in the efforts to reduce greenhouse gas emissions and the use of persistent, bioaccumulative, and toxic chemicals.

FY 99-A(7)(b) Virtual Sector Guides. OIA is continuing work with several EPA Offices and others to complete Internet-based virtual sector guides for pollution prevention and environmental management in the food processing and electronics industries to be located on EPA's Enviroene database.

Action B. Build management capacity to conduct sector-based environmental protection

FY 99-B(1) SIC/NAICS Identification. On January 1, 1999, the Agency instituted a requirement that all documents related to EPA's regulatory, compliance, and enforcement activities, including rules, policies, interpretive guidance, and site-specific determinations, identify the regulated or affected sectors, using Standard Industrial Classification (SIC) or North American Industry Classification System (NAICS) codes where possible. In FY 99, the Office of Reinvention created a cross-Agency workgroup to encourage the use of sector identification in Agency activities and to develop appropriate training materials and tools to support the Agency's effort to transition from SIC to NAICS codes. In FY 2000, the Agency will continue this workgroup. In addition, the Agency will begin to compile a database of rules, policies, guidances, and site-specific determinations and the sectors that are impacted by these actions to help understand how the Agency as a whole is impacting individual sectors.

FY 99-B(2) EPA Sectors Web Site. The Agency will continue to develop its sector web site (http://www.epa.gov/sectors) as a repository for sector-based data and as way to share information about sector tools and activities both across the Agency and externally.

FY 99-B(3) Sector Tools Compendium. In FY 2000, the Agency will make available (via the EPA sector web site) the sector tools compendium that began development in FY 99. The Agency will continue to investigate and evaluate the value of existing and potential new tools for inclusion in the compendium and will design delivery mechanisms to ensure EPA staff are aware of and understand these resources.

FY 99-B(4) Evaluation of Sector Activities. OR will coordinate evaluations of the actions presented in the FY 99 and FY 2000 sector action plans to determine their effectiveness and identify lessons learned that could assist in improving sector-based efforts. Evaluations of other reinvention activities (e.g., Project XL) will be done to explore the application of their results to sector-based work.

FY 99-B(5) Staff Recognition and Reward. In implementing the FY 99 Plan, EPA expanded an Agency Award on Innovation to include sector-based efforts. The Task Force on Coordinated Rulemaking also recommended that management and staff who conduct prospective cross-Agency planning/coordination be encouraged with incentives to acknowledge the difficulty of going beyond the traditional media focus to capture cross-media opportunities. Also, the Agency's Report of the Innovations Task Force includes similar recommendations for development and implementation of a recognition and reward program for Agency staff who have attained significant achievements through innovation and creativity. Thus, in FY 2000, the Agency will pursue staff recognition and rewards that include incentives for engaging in cross-Agency sector activities.

FY-99-B(6) Annual Plans. Annual program office guidance on program priorities and the integration of annual plans under the Government Performance and Results Act (GPRA) are opportunities to incorporate the sector approach, as appropriate, toward achieving national environmental goals. In FY 2000, the Office of Policy and Reinvention will evaluate program office and regional office annual plans to assist in understanding sector-related activities across the Agency.

Action C. Craft Sector-based Solutions with External Stakeholders

FY 99-C(1) Sector FACA Committee. In FY 99, the Agency set up a new FACA committee, under the current National Advisory Council for Environmental Policy and Technology (NACEPT), as a successor to the CSI Council. This new Sector Committee is providing input on the development of this FY 2000 Action Plan as well as participating in other sector activities. The NACEPT Sector Committee will continue to meet and work on sector activities through FY 2000.

FY 99-C(2) Sector Liaison Network. The FY 99 Action Plan indicated that the Agency would complete an evaluation of the effectiveness of a national and regional liaison network established for the CSI Iron and Steel Sector in 1997. That assessment was completed and distributed in March 1999. In FY 2000, the Agency will evaluate the feasibility of the use of liaisons in one or two new sectors.

FY 99-C(3) Stakeholder Action Plan. In FY 99, the Agency began implementation of a stakeholder action plan developed by the Agency with the help of the CSI Council. This plan is primarily aimed at building the internal capacity of EPA employees to carry out meaningful stakeholder activities. For example, the Agency created an Intranet/Internet site to share information and "lessons learned" about stakeholder involvement across the Agency (see http://www.epa.gov/stakeholders). In FY 2000, the Agency will continue to take steps to increase the opportunities and quality of stakeholder involvement in EPA program and regional offices.

Appendix II-2000
Overview of Projects in FY 2000 Sector Action Plan

New for FY 2000

Action A. Implementing Sector Approaches Within Agency Core Functions

Action A(1) ***Permitting*: Work with Regions, states, and tribes to implement sector-based permitting projects.**

FY 2000-A(1)(a) Printers' Simplified Total Environmental Partnership (PrintSTEP). The CSI Printing Subcommittee is continuing its work as a NACEPT working group. In FY 2000, EPA, working in conjunction with the NACEPT working group, will pilot the PrintSTEP (Printers' Simplified Total Environmental Partnership) project in at least three states. The goal of PrintSTEP is to help the printing industry and the public achieve cleaner, cheaper, and smarter environmental protection through the creation of a simpler regulatory framework. The process will involve a multi-media, modular approach with the level of regulatory oversight proportional to the level of waste generation and/or emissions. It will include enhanced opportunity for public involvement, plain language tools to assist printers in determining emissions and their regulatory requirements, and a streamlined permitting process. An evaluation process will be conducted to determine the effectiveness of the process.

FY 2000-A(1)(b) Innovations Task Force -- Pollution Prevention in Permitting Project. The benefits of flexible sector-based permitting approaches are recognized from Project XL and from the Pollution Prevention in Permitting Project (P4) pilots described above. In FY 2000, the Innovations Task Force recommends that the Agency further develop air permitting policies that protect the environment in more flexible ways. The Agency will identify approaches to air permitting that increase flexibility while providing equal or better levels of environmental and public health protection, provide incentives for P2, and ensure public participation in permitting decisions. As part of this action, the Agency will identify and work with those selected sectors that offer the greatest benefits.

Action A(2) ***Rulemaking*: Identify and initiate coordinated rulemakings.**

FY 99-A(2)(a) Coordinated Rulemaking. An Agency Task Force on Coordinated Rulemaking was convened in FY 99 to select potential sectors for multi-office coordination in rulemaking. The Task Force found that rules impacting a particular sector (or sectors) can be coordinated in varying degrees along a continuum of activities, including information/data gathering (from a variety of sources, including external stakeholders such as potentially affected sectors); information/data sharing; regulatory, technical, and economic analysis; stakeholder involvement; scheduling; and implementation. In addition, the degree of coordination within each of these activities along the continuum can vary from a low level of coordination (e.g., simple consultation between program offices) to a high level (i.e., a fully integrated effort between program offices). (This continuum of coordination can also be used to illustrate cross-Agency interaction on non-regulatory sector activities.) The Task Force identified the following sectors

as having high potential for rulemaking coordination at the information gathering stage: mercury cell chloralkali plants, animal feeding operations, and publically owned treatment works (POTWs). The Agency will begin coordination efforts for these sectors in FY 2000. Through the collection of information and data, the Agency, in conjunction with external stakeholders, will determine the extent to which regulatory actions will be taken, if at all, for these sectors.

Action A(3) ***Enforcement and Compliance Assurance*: Implement sector activities to achieve a higher level of efficiency in enforcement and compliance within priority sectors.**

FY 2000-A(3)(a) Sector "Graduation." In FY 2000, the NACEPT Petroleum Refining Workgroup (continuing the work of the CSI Petroleum Refining Subcommittee) is exploring with EPA the development of a process that will inform a sector (using petroleum refining as an example) of its progress toward "graduation" from being a priority sector for OECA. This process could delineate the criteria for "graduation" and provide a "score card" for helping the sector understand its progress toward meeting these requirements.

FY 2000-A(3)(b) Innovations Task Force -- Compliance Assistance Clearinghouse. The Office of Compliance, with input from external stakeholders, is developing a clearinghouse of compliance assistance tools and materials that will be searchable by sector. The purpose of the clearinghouse is to provide easy access to compliance assistance materials and tools currently available from EPA, other federal agencies, state and local governments, tribes, and trade associations/industry. In addition to providing useful information to the users, the clearinghouse also will prevent duplication and overlap of compliance assistance activities that ultimately will save resources for regulators and compliance assistance providers. The information will be available electronically via a Web site and a catalogue to assist in obtaining hard copies of materials.

(A)(4) ***Solving Regional Problems*: implement sector-based projects to address regional priority problems.**

FY 2000-A(4)(a) CBEP and Sectors. Many of EPA's regional offices are conducting community-based environmental protection programs (CBEP). CBEP brings together public and private stakeholders in a specific place or community to identify environmental and public health concerns, set priorities, and forge comprehensive solutions toward sustainable communities. The Agency is exploring CBEP projects that would apply a sector-based approach to solving the environmental concerns identified in a specific place or community. While most place-based efforts may not be specific to one particular sector, some locales are dominated by a certain sector, such as mineral extraction and agriculture, that may afford an opportunity for a combined CBEP-sector approach. By applying a source approach to solve a place-based environmental concern, the Agency may achieve some synergy and efficiency in the use of its resources. In FY 2000, the Agency will seek to combine a community and sector approach in at least one place-based project.

The Canada-United States Strategy for the Virtual Elimination of Persistent Toxic Substances in the Great Lakes Basin, known as the Great Lakes Binational Toxics Strategy (BNS), provides potential opportunities for employing a place-based sector approach. The purpose of this binational strategy is to

set forth a collaborative process by which Canada and the U.S. and interested stakeholders will work towards the goal of virtual elimination of persistent toxic substances resulting from human activity, particularly those which bioaccumulate, from the Great Lakes basin, so as to protect and ensure the health and integrity of the Great Lakes ecosystem. Through its Great Lakes National Program Office, the Agency will pursue CBEP-sector efforts to help achieve the goals of the BNS.

A(5) ***Building Voluntary Partnerships*: partner with private sector to improve environmental performance.**

FY 2000-A(5)(a) Persistent, Bioaccumulative, and Toxic Pollutant Initiative. The Agency currently is involved in a major effort to reduce risks to public health and the environment from existing and future exposure to priority persistent, bioaccumulative, and toxic (PBT) pollutants. These pollutants pose risks because they are toxic, persist in ecosystems, and accumulate in the food chain. The PBT challenges stem from the pollutants' ability to travel long distances; to transfer easily among air, water, and land media; and to linger for generations, limiting the success of EPA's traditional single-statute approaches to reducing risks from PBTs. EPA is committing, through a PBT strategy, to create an enduring cross-Agency system that will address the cross-media issues associated with priority PBT pollutants.

In FY 2000, the Agency expects to complete development and begin implementation of action plans for an initial 12 PBT pollutants using the full range of tools to prevent and reduce releases of PBTs. These pollutants include: aldrin/dieldrin, benzo(a)pyrene, chlordane, DDT, hexachlorobenzene, alkyl-lead, mercury and compounds, mirex, octachlorostyrene, PCBs, dioxins and furans, and toxaphene. These tools include international, voluntary, regulatory, programmatic, remedial, compliance monitoring and assistance, enforcement, research, and outreach tools. The Agency will seek to maximize the use of voluntary partnerships in the PBT action plans. EPA will analyze PBT pollutant sources and reduction options as the basis for grouping pollutants and activities within sectors to maximize efficiencies in achieving reductions. EPA will integrate and sequence actions within and across action plans, and will seek to leverage these actions on an international and industry sector basis. EPA will seek external stakeholder input in development of these action plans.

EPA's Science Advisory Board (SAB) plans to review the draft criteria and process developed by the PBT Plenary choosing a third round of PBT chemicals. SAB will conduct the review with special emphasis on (a) how to handle expos prevention opportunity analysis as a screening/selection criterion.

FY 2000-A(5)(b) Environmental Roadmapping Initiative. In FY 99, the Office of Reinvention entered into a cooperative agreement with the National Center for Manufacturing Sciences (NCMS) for the purposes of initiating an Environmental Roadmapping Initiative (ERI). The ERI, which will begin in earnest in FY 2000, will provide for a collaborative process among industry, government, and stakeholders groups to set appropriate, verifiable, and enforceable performance goals on a sector-by-sector basis. The two sectors proposed for this effort are the construction and off-road equipment sector and the municipalities/local government sector. The ERI will identify: the significant environmental risks posed by the sector; the available technologies and practices to manage those risks; critical needs where gaps exist between identified risks and the means for controlling or preventing those risks; and measurable means for closing these gaps. The environmental roadmap will provide the technical basis for individual

organizations within the chosen sectors to develop their own environmental management systems (EMS). The EMS will serve both as a platform for maintaining environmental compliance at a baseline level and as a means for encouraging "beyond-compliance" performance.

FY 2000-A(5)(c) Innovations Task Force -- Environmental Management System Assessment. Working with states, tribes, and other stakeholders, the Agency will assess the real-world use of Environmental Management Systems (EMSs) and look at their implications for environmental programs and policies. The Agency will assist selected sectors, particularly those represented by smaller businesses, to develop and test EMSs.

FY 2000-A(5)(d) Innovations Task Force -- Sector-Specific Voluntary Partnership Programs. The Agency, working through its Partnership Programs Coordinating Committee, will work with interested sectors to determine which of the Agency's voluntary partnership programs have the greatest value for the sectors' specific operations, how these programs might best be packaged to simplify use, and whether new features are needed to meet their needs.

The Agency already has begun to work with the industrial laundry (IL) sector in this effort. The IL sector includes textile items, such as linens, shop and print towels, uniforms, floor mats, mops and other items for thousands of industrial have begun the Laundry Environmental Stewardship Program (*Laundry ESP)*, a voluntary multi-media pollution prevention water use and increase the use of environmentally friendly wash formulas by 2002. A group of EPA Partnership Programs, Environment, Energy Star Buildings, and Climate Wise have joined together to work with the *Laundry ESP* to help the indu

A(7) *International*: incorporate sector-based approaches into international activities.

FY 2000-A(7)(a) Tributyltin Initiative. Antifoulant specialty coatings are applied to the underwater portion of a vessel to prevent or reduce the attachment of fouling organisms which would otherwise adhere to the vessel, increasing drag and decreasing fuel efficiency. Tributyltin (TBT)-based antifouling systems are a large portion of the world market because they are relatively inexpensive, are effective, and have a long-life on the vessel hull. TBT also is extremely toxic to non-target organisms (including economically important species) and highly persistent in the aquatic environment (esp. sediments). Although TBT is severely restricted in the U.S., the Agency has determined that greater restrictions are needed to mitigate risks in U.S. waters. A global ban would be more beneficial than a unilateral one since inputs of TBT to U.S. waters come primarily from vessels painted overseas and a unilateral ban is viewed as detrimental to U.S. shipyards.

The International Maritime Organization, with the support of the U.S., is developing a treaty to ban TBT antifouling systems worldwide by 2003. The availability of suitable alternatives to TBT is critical to U.S. stakeholder support of the treaty, but the U.S. lags behind other countries in registration of TBT-free alternatives. The lag is due to a small shipyard market relative to Asia, and because of the rigorous decision-making process for registration of component biocides in the U.S. In addition, EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) for shipyards set limits for emission of Volatile Organic Compounds (VOCs) for antifouling paints. These limits were based on VOC limits for antifoulant coatings limits already in effect in the State of California.

Compliant antifoulant coatings are already being used by the U.S. Navy, one of the largest domestic users of shipbuilding and repair coatings; however, there are concerns that the NESHAP may prevent the use of a new generation of antifoulants which appear to be more effective and to represent reduced risk relative to TBT, but which exceed established VOC limits. The feasibility of using existing compliant coatings to substitute for TBT, and of add-on controls for non-compliant coatings, must be further explored, but some parties are still concerned about the potential for significant economic impacts to U.S. shipyards. The manufacturer of one especially promising antifouling paint has begun the process of reformulating its non-compliant product for VOC compliance, but has indicated that the reformulated product is not likely to be commercially available before the proposed TBT ban date.

In FY 2000, the Agency will pursue cross-office coordination to explore regulatory and other approaches to maximizing environmental benefits and minimizing impacts to U.S. shipyards in consideration of the TBT ban. The Agency will include outside stakeholder participation, including representatives from industry and environmental non-governmental organizations, in furtherance of this objective.

Action B. Build management capacity to conduct sector-based environmental protection

FY 2000-B(1) Agency-Wide Sector Planning Process. During FY 2000, the Agency will implement a sector planning process for identifying and coordinating opportunities for regulatory and non-regulatory sector activities across the Agency. The process will involve regular meetings of an existing Agency staff-level sector workgroup to discuss coordination and implementation of cross-Agency sector projects. The planning process also will include Agency interaction with external stakeholders via the FACA-sponsored NACEPT Sector Committee that was created to provide external stakeholder advice and consultation to the Agency on sector-related issues. The sector workgroup meetings and interactions with the NACEPT Sector Committee will then feed preparation of an annual retreat of EPA program office directors. At the retreat, the office directors will discuss strategic planning and budget issues relative to sector activities occurring in their respective program offices. The overall purpose of this meeting would be to develop a meaningful Agency sector coordination strategy that will serve as the basis of the Sector Action Plan for FY 2001 and beyond. The meeting also will serve to identify new sectors for Agency coordination on potential rulemaking and to highlight cross-Agency sector projects that may require specific funding in future fiscal year budgets.

After the annual planning meeting, and once more during the course of the year, the Office Directors would meet with external stakeholders via the NACEPT Sector Committee to report on Agency sector activities and to listen to issues raised by the stakeholders. This new Office Director-level forum would be accountable to the Reinvention Action Council (RAC), which is composed of Deputy Assistant Administrators and Deputy Regional Administrators, and thus would have the attention and direction of senior managers in the Agency. It is this type of senior management attention that external stakeholders desire to help ensure that sector-based activities are afforded serious consideration as a way of conducting Agency business.

Subsequent to their planning meeting and interface with external stakeholders, the Office Director group would provide direction to the existing staff-level Agency Sector Workgroup for ensuring cross-Agency coordination and implementation of sector activities. As the Sector Workgroup conducts its

business during the course of the year, it may need senior-level Agency management advice and consultation that cannot wait for an annual sector-based Office Directors meeting. To address this need, the Sector Workgroup will bring their issues to the existing Multi-Media and Pollution Prevention (M2P2) Forum. This Office Director-level forum was established in 1997 to examine a variety of multi-media and pollution prevention issues across the Agency. This Forum continues to meet quarterly to work on issues and strategies regarding the Persistent, Bioaccumulative, and Toxic (PBT) pollutant Initiative (described below under Significant New Projects for FY 2000). While their current focus centers on PBT issues, the M2P2 Forum has agreed to serve as a venue for discussing issues concerning coordination of cross-Agency sector activities.

FY 2000-B(2) Performance Measurement. As discussed earlier in this Action Plan, in FY 2000 the Agency will finalize a measurement framework for identifying and reporting results of the Agency's sector activities and will commence with this measurement program.

Action C. Craft Sector-based Solutions with External Stakeholders

FY 2000-C(1) Innovations Task Force -- Public Participation Analysis. In accordance with the Innovations Task Force Report, EPA's Regulatory Steering Committee has charged a workgroup to review all of EPA's public participation statutes, regulations, and policies to assess how well they ensure public participation in decision-making. The workgroup will prepare a report of its findings and develop an Action Plan to upgrade requirements and fill gaps, as necessary.

Appendix III
Sectors Affected by FY 99 and FY 2000 Projects

This Appendix provides an at-a-glance identification of those sectors that are affected by the FY 99 and 2000 projects identified in the FY 2000 Sector Action Plan. Note that some of the programs described in this Action Plan, such as the Design for the Environment Program, are working with other sectors, but because these sector efforts are not specifically included in the FY 2000 Action Plan, they are not listed in this table.

Sector	Total Number of Projects	Actions						
		A(1) Permitting	A(2) Rulemaking	A(3) Enforcement & CA	A(4) Regional Activities	A(5)Voluntary Partnerships	A(6) Research	A(7) International
Agriculture - general	1				FY 99-A(4)(c)			
Agriculture - Concentrated Animal Feeding Operations (CAFOs)	2		FY 2000-A(2)(a)	FY 99-A(3)(a)				
Automotive	1					FY 99-A(5)(b)		
Chemicals	5	FY 99-A(1)(c)		FY 99-A(3)(a)		FY 99-A(5)(a), FY 99-A(5)(b)	FY99-A(6)(b)	
Chemical Uses/ Formulations	3					FY 99-A(5)(a), FY 99-A(5)(b)		FY 2000-A(7)(a)
Coal Fired Utilities	1			FY 99-A(3)(a)				
Coatings	2					FY 99-A(5)(b)	FY 99-A(6)(b)	
Computers & Electronics	2					FY 99-A(5)(b)		FY 99-A(7)(b)
Construction	1					FY 2000-A(5)(b)		

Sector	Total Number of Projects	Actions						
		A(1) Permitting	A(2) Rulemaking	A(3) Enforcement & CA	A(4) Regional Activities	A(5)Voluntary Partnerships	A(6) Research	A(7) International
Dry Cleaners	2	FY 99-A(1)(b)				FY 99-A(5)(b)		
Fabric Cleaning	2					FY 99-A(5)(b)	FY 99-A(6)(b)	
Fabricated Metals and Processing Aids	1					FY 99-A(5)(b)		
Flexible Foam Furniture Industry	1					FY 99-A(5)(b)		
Food Processing	2					FY 99-A(5)(a)		FY 99-A(7)(b)
Industrial Laundries	1					FY 99-A(5)(b)		
Iron and Steel	1			FY 99-A(3)(a)				
Local Govts -Publicly Owned Treatment Works (POTWs)	5		FY 2000-A(2)(a)		FY 99-A(4)(a), FY 99-A(4)(b)	FY 99-A(5)(a)	FY 99-A(6)(a)	
Local Governments - general	4		FY 2000-A(2)(a)		FY 99-A(4)(a)	FY 99-A(5)(a), FY 2000-A(5)(b)		
Mercury Cell Chloralkali Plants	1		FY 2000-A(2)(a)					
Metal Finishing	4				FY 99-A(4)(a)	FY 99-A(5)(a), FY 2000- A(5)(c)	FY 99-A(6)(a)	
Metal Foundries and Die Casting	1					FY 99-A(5)(a)		

Sector	Total Number of Projects	Actions						
		A(1) Permitting	A(2) Rulemaking	A(3) Enforcement & CA	A(4) Regional Activities	A(5)Voluntary Partnerships	A(6) Research	A(7) International
Metal Services	1			FY 99-A(3)(a)				
Mining	1				FY 99-A(4)(d)			
Non-Ferrous Metals	1			FY 99-A(3)(a)				
Petroleum Refining	2			FY 99-A(3)(a), FY 2000-A(3)(a)				
Pharmaceutical	1	FY 99-A(1)(a)						
Photo processing	2	FY 99-A(1)(b)				FY 99-A(5)(a)		
Printed Wiring Board	1					FY 99-A(5)(b)		
Printing	3	FY 99-A(1)(b) FY 2000-A(1)(a)				FY 99-A(5)(b)		
Public Water Systems	3		FY 2000-A(2)(a)		FY 99-A(4)(a)	FY 99-A(5)(a)		
Shipbuilding/ Ship Repair	2					FY 99-A(5)(a)		FY 2000-A(7)(a)
Travel and Tourism (Mountain Resort Subsector)	1					FY 99-A(5)(a)		
Multiple Sectors Affected	1			FY 2000-A(3)(b)				

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Sector	Total Number of Projects	Actions						
		A(1) Permitting	A(2) Rulemaking	A(3) Enforcement & CA	A(4) Regional Activities	A(5)Voluntary Partnerships	A(6) Research	A(7) International
Sectors to be Determined	8	FY 2000-A(1)(b)			FY 2000-A(4)(a)	FY 99-A(5)(a), FY 99-A(5)(b), FY 2000-A(5)(a), FY 2000-A(5)(c), FY 2000-A(5)(d)		FY 99-A(7)(a)

FY 99-A(1)(a) Pollution Prevention in Permitting Program (P4)
FY 99-A(1)(b) Massachusetts ERP Program
FY 99-A(1)(c) Sector-Based Permit Reform Projects
FY 2000-A(1)(a) PrintSTEP Pilots
FY 2000-A(1)(b) Innovations Task Force - Pollution Prevention in Permitting Program
FY 2000-A(2)(a) Coordinated Rulemaking
FY 99-A(3)(a) OECA Sector Strategies
FY 2000-A(3)(a) Sector "Graduation"
FY 2000-A(3)(b) Compliance Assistance Clearinghouse
FY 99-A(4)(a) Metal Finishing Strategic Goals Program
FY 99-A(4)(b) Region 4 Management, Operation, and Maintenance project with POTWs
FY 99-A(4)(c) Region 9 Agriculture Initiative
FY 99-A(4)(d) Region 10 Mining Initiative
FY 2000-A(4)(a) CBEP and sectors
FY 99-A(5)(a) Sustainable Industry Program
FY 99-A(5)(b) DfE Program
FY 2000-A(5)(a) PBT Initiative
FY 2000-A(5)(b) Environmental Roadmapping Initiative (ERI)
FY 2000-A(5)(c) Environmental Management Systems (EMSs)
FY 2000-A(5)(d) Voluntary partnership programs and sectors
FY 00-A(6)(a) National Metal Finishing Environmental R&D Plan
FY 99-A(6)(b) Science to Achieve Results/Environmentally Benign Solvents
FY 99-A(7)(a) Global and Cross-Border Environmental Risks
FY 99-A(7)(b) Virtual Sector Guides
FY 2000-A(7)(a) Tributyltin (TBT) Initiative

Appendix IV
Implementation Plan for Actions in the FY 2000 Sector Action Plan

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
A(1) Permitting: Work with regions and states to implement sector-based permitting projects	FY 99-A(1)(a) Pollution Prevention in Permitting Program (P4)	Mike Trutna, OAQPS 919-541-5345	1/99: Completion of draft Merck P4 permit with MACT placeholders. 5/28/99: Draft Merck permit released including draft MACT Continuous Emission Monitoring System proposal. 6/28/99: Public Hearing for Draft permit. Fall 99: Final permit released.
	FY 99-A(1)(b) Massachusetts Environmental Results Program (ERP)	Martha Curran Region 1 617-918-1801 Ted Cochin, OPR 202-260-0880	10/98: Final XL Umbrella Project Agreement signed. 12/98: State/EPA meeting to review status of current and future sector regulations and the status of their evaluations. 2/99: Workshop on Performance Measures that included Mass. Dept. of Env. Protection (DEP) and other state and EPA programs. Environmental Business Practice Indicators (EBPIs) was one of the topics discussed. 3/99: The contractor submitted its final report that documented the methodology that DEP will use to evaluate ERP using sector-specific EBPIs. 5/99: Draft sector-specific addendum for dry cleaners submitted by MADEP to EPA. 2/00: EBPI for dry cleaners finalized.

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
	FY 99-A(1)(c) Sector-Based Permit Reform Projects	Barry Elman, OPR 202-260-2727	Fall 99: Initiate the first of two or more sector-based permit reform projects from among SI candidate sectors, in consultation with relevant EPA programs and regions. 9-mo. from start-up: Complete Sustainable Industry diagnostic analysis with focus on sector-specific barriers to permit reform and validate diagnostic findings. 1 year from start-up: Work with EPA programs and other stakeholders to develop strategic action plans to address priority issues. 18 mo. from start-up: Implement permitting pilots, demonstration projects, and/or other activities to test new sector-wide permit approaches. Develop lessons learned analysis based on process and project experiences.
	FY 2000-A(1)(a) PrintSTEP pilots	Gina Bushong, OECA 202-564-2242	4/99: Grant solicitation publication. 7/99: State grant proposal to EPA. 9/99: Grants announced. Early 2000: Collection of baseline data. 2001: Midpoint data collection. 2002: Final data/recommendations.
	FY 2000-A(1)(b) Pollution Prevention in Permitting Project (Recommendation from the Innovations Task Force Report)	OAR, OPR	12/99: Information management system for flexible permitting under Title V of the CAA. Mid-2000: Sector Permit Model
A(2) Rulemaking: Identify and initiate coordinated rulemakings	FY 2000-A(2)(a) Coordinated Rulemaking	Andy Teplitzky, OPR 202-260-4088 David Nicholas, OSWER 202-260-4512	10/99: Administrator sends out memo requesting workgroup members for each sector 12/99: First meeting of each workgroup to plan for coordination

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
A(3) Enforcement and Compliance Assurance: Implement sector activities to achieve a higher level of efficiency in enforcement and compliance within priority sectors	FY 99-A(3)(a)OECA National Sector Strategies	Desi Crouther, OECA 202 564-2264 Bob Tolpa, OECA 202 564-2337	Each strategy has its own implementation schedule that remains confidential given the enforcement sensitivity of the strategies.
	FY 2000-A(3)(a) Sector "Graduation"	Bob Tolpa, OECA 202-564-2337	11/99: Begin to consider elements of a "graduation" plan 01/00: Craft outline of plan 02/00: Present preliminary outline of plan to NACEPT committee
	FY 2000-A(3)(b) Compliance Assistance Clearinghouse (Innovations Task Force Report)	Emily Chow, OECA 202-564-7071	10/99: Begin development of clearinghouse. 3/2000: Seek broad stakeholder input on design 9/2000: Clearinghouse of compliance assistance materials will be available for compliance assistance providers and the public.
A(4) Solving Regional Problems: Implement sector-based projects to address regional priority problems	FY 99 A(4)(a) Metal Finishing Strategic Goals Program	Robert Benson, OPR (202) 260-8668	Milestones vary among target areas. Visit www.epa.gov/sustainableindustry or www.strategicgoals.org for more information.
	FY 99-A(4)(b) Region 4 Management, Operation, and Maintenance project with POTWs	Roy Herwig Region 4 404-562-9758	1/99: Region 4 will begin meeting with the POTWs to assure common expectations of the audit. 4/99: Watersheds in the remaining two Region 4 states will be chosen and letters sent to the POTWs. 4th Quarter FY 99: Round 1 and 2 audit results will be submitted to EPA. 2005: POTWs serving 40% of the Region 4 NPDES population will be implementing proper Management, Operation and Maintenance (MOM)

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
	FY 99-A(4)(c) Region 9 Agriculture Initiative	Paul Augie Feder Region 9 (415) 744-2010	12/98: First meeting of FQPA Grape Project Advisory Team including leading representatives from industry and environmental groups. Spring 99: Hold workshop with partners to improve performance measures especially the use of California's unique pesticide use reporting system. Spring 2000: Establish a second FQPA partnership with a leading agricultural commodity.
	FY 99-A(4)(d) Region 10 Mining Initiative	Nicholas Ceto, Region 10 (206) 553-1816	1/30/99: Initial state AML meetings in Oregon, Washington, Idaho, and Alaska. 3/99: Follow-up meeting to the Initial State AML meeting with Alaska 5/30/99: Initiation of AML database development in each state. 10/30/99: Working draft AML database available for each state. 12/30/99: Draft list of priority AML sites developed for each state.
	FY 2000 A(4)(a) CBEP and sectors	Andy Teplitzky, OPR 202-260-4088 Gerald Filbin, OPR 202-260-8099	12/99: Select project(s) with focus on U.S.-Canada Binational Toxics Strategy
A(5) Building Partnerships: Partner with private sector to improve environmental performance	FY 99-A(5)(a) Sustainable Industry Program	(a) Robert Benson, OPR (202) 260-8668	All SI milestones are sector-specific. Visit Web site for details on specific projects: www.epa.gov/sustainableindustry.
	FY 99-A(5)(b) Design for the Environment (DfE)	John Sparks, OPPTS (202) 260-1682 Bill Hanson, OPPTS (202) 260-0686	Visit Web site for details: www.epa.gov/dfe.

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
	FY 2000-A(5)(a) PBT Initiative and sectors	Tom Murray, OPPTS (202) 260-1876 Sam Sasnett, OPPTS (202) 260-8020	11/99-12/99: M2P2 Forum meeting to discuss PBT Sector Approach; clarify combustion-related sector sources. 2/00: PBT sector sources identified as part of FY 2000 PBT Budgetary actions.
	FY 2000-A(5)(b) Environmental Roadmapping Initiative	Andy Teplitzky, OPR 202-260-4088	11/99: Launch Construction and Heavy Equipment Sector participation 12/99 Launch Local Government Sector participation 9/00: Complete first draft of Environmental Roadmap Document for Construction and Heavy Equipment Sector. 12/00: Complete first draft of Environmental Roadmap Document for Local Government Sector 4/01: Publish final version of Environmental Roadmap Document for Construction and Heavy Equipment Sector 7/01: Public final version of Environmental Roadmap Document for Local Government Sector
	FY 2000-A(5)(c) Environmental Management Systems (EMSs) (Innovations Task Force Report)	OPR, OW, OPPTS, OECA, Regions 1 & 9 George Wyeth, OPR 202-260-7726	8/5/99: Form cross-Agency workgroup to develop strategic plan. 10/99: Circulate draft plan for internal comment in all relevant offices, and all regions. 11/99: Obtain external stakeholder comment on draft plan. 12/99: Complete final plan.
	FY 2000-A(5)(d) Voluntary partnership programs and sectors (Innovations Task Force Report)	Partnership Program Coordinating Committee, OPR Rebecca Nachtrieb, OPR, 202-260-7423	3/00: Potential sectors identified 5/00: Process for administering and selecting sectors is prepared and implemented. 5/01: Agreements signed with selected sector representatives.

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
A(6) Research and Applications of Science: Looking for new pollution prevention and technology solutions	FY 99-A(6)(a) National Metal Finishing Environmental R&D Plan	Dave Ferguson, ORD (513) 569-7518	1/99: Papers presented on the fume suppressant, approaching zero discharge, verification, and risk screening tool projects at the 20th Annual EPA-AESF Week Conference in Orlando, Fl. 2/99: Peer review of SBIR Phase I proposals. 3/99: Second stakeholder meeting for verification project. 9/99: Fume Suppressant project and first Approaching Zero Project complete. 4/00: Complete Metal Finishing Facility Risk Screening Tool Within Next Year (by September 2000); update the Metal Finishing R&D Plan.
	FY 99-A(6)(b) Science to Achieve Results/Environmentally Benign Solvents	Steve Lingle, ORD (202) 564-6821 Barbara Karn, ORD (202) 564-6824	4/99: (1) New solicitation under Technology for a Sustainable Environment (TSE), and (2) First set of research final reports posted 6/99: Highlight research from TSE at the American Chemical Society Green Chemistry and Engineering Conference 7/99: Release report for review that includes information about P2 with examples from TSE. 11/99: Highlight research for TSE at the American Institute of Chemical Engineers meeting. 4/00: Set of research final reports posted on Internet. 8/00: Highlight research from TSE at American Chemical Society meeting.
(7) International Activities: Incorporate sector-based approaches into international activities	FY 99-A(7)(a) Global and cross-border environmental risks	Ted MacDonald, OIA (202) 564-6114	4/99: U.S.-China project agreement for sector-based pollution prevention/energy efficiency project signed. 12/99: U.S.-China project initiated 12/99: EPA participation in international conference on industrial performance metrics.
	FY 99-A(7)(b)Virtual Sector Guides	Myles Morse, ORD 202-564-6827	Summer-Fall 99: Interagency consultations on possible role of guides to assimilate and disseminate sector information in context of new EPA Information Office.

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
	FY 2000-A(7)(a) Tributyltin (TBT) Initiative	Teresa Lozinger, OPR 202-260-5414 Jill Bloom, OPPTS 703-308-8019	10/99-12/99: Meet with TBT workgroup to discuss issues and how to best resolve them; focus on and XL project as an avenue for resolution.
Action B. Build management capacity to conduct sector-based environmental protection	FY 99-B(1) SIC/NAICS Identification	Andy Teplitzky, OPR (202) 260-4088	1/00: Release of the annual report on sector identification progress by various EPA programs and offices.
	FY 99-B(2) Sectors Web site	Kim Green-Goldsborough, OPR (202) 260-4297	Continue to update the Website throughout the year.
	FY 99-B(3) Sector Tools Compendium	Katherine Dawes, OPR (202) 260-8394	12/99: Final report 1/00: Posted on Sectors Web site with search capability.
	FY 99-B(4) Evaluation Sector Activity	Katherine Dawes, OPR (202) 260- 8394 Sandra Panetta, OPR (202) 260-6632	2/99: Evaluation of sector liaisons completed. 3/99: Final report on CSI performance measures completed. 7/99: Comprehensive evaluation of the four years of the Common Sense Initiative completed. 9/00: Report on analysis of sector innovations.
	FY 99-B(5) Staff recognition and rewards	Karen Flagstad, OPR (202) 260-9093	Beginning in FY 99, the Innovation Leadership Award is given annually in the spring.
	FY 99-B(6) Annual Plans	Greg Ondich, OPR 202-260-4822	12/99: Development of GPRA goals for FY 2001-2006
	FY 2000-B(1) Agency-Wide Sector Planning Process	Andy Teplitzky, OPR 202-260-4088	10/99-1/00: Meet with sector workgroup and NACEPT committee members to prepare for Office Directors Meeting. 1/00: Conduct Office Directors Meeting. 2/00: Office Directors Meet with RAC. 2/00: Office Directors Meet with NACEPT. 4/00: First draft of 2001 Sector Action Plan.

Actions		Lead	Milestones
Strategies (What)	**Activities (How)**		
	FY 2000-B(2) Performance Measures for Sector Activity	Katherine Dawes, OPR 202-260-8394	11/99: Final strategy for sector performance measures. 9/00: Report on sector performance measures.
Action C: Create a FACA-sponsored committee dedicated to providing advice and consultation to the Agency on sector-based issues	FY 99-C(1) Sector FACA Committee	Kathleen Bailey, OPR (202) 260-3413	12/98 - 2/99: Membership invitations. 4/15/99: First meeting of the Sectors Committee. 7/29/99: Second meeting of the Sectors Committee. 10/13/99: Third meeting of the Sectors Committee.
	FY 99-C(2) Sector Liaison Network	Katherine Dawes, OPR (202) 260-8394	3/26/99: Report complete. 3/31/99: Recommendations to the Innovations Task Force for action. 6/00: Potential identification and testing of using liaisons in 1-2 new sectors.
	FY 99-C(3) Stakeholder Action Plan	Kathleen Bailey, OPR (202) 260-3413	Refer to the Stakeholder Involvement Action Plan for specific Action items and milestones: www.epa.gov/stakeholders/intro.htm.
	FY 2000-C(1) Innovations Task Force Report-Public Participation Analysis	Kathleen Bailey, OPR (202) 260-3413	1/00: Task Force Report completed and submitted to agency management for review. 3/00: “Better Decisions through Consultation and Collaboration” Manual completed.

Abbreviations List

AML - Abandoned Mine Lands (AML)
CAFOs - Concentrated Animal Feeding Operations
CBEP - Community-Based Environmental Protection (CBEP)
CSI - Common Sense Initiative
DfE - Design for the Environment
EMS - Environmental Management Systems
EPA - Environmental Protection Agency
ERI - Environmental Roadmapping Initiative
ERP - Environmental Results Program
FACA - Federal Advisory Committee Act
FQPA - Food Quality Protection Act
GPRA - Government Performance and Results Act
NACEPT - National Advisory Council for Environmental Policy and Technology
NAICS - North American Industry Classification System
NCMS - National Center for Manufacturing Sciences
OAQPS - Office of Air Quality Planning and Standards
OAR - Office of Air and Radiation
OECA - Office of Enforcement and Compliance Assurance
OIA - Office of International Activities
OPPTS - Office of Pollution Prevention and Toxics
OPR - Office of Policy and Reinvention
ORD - Office of Research and Development
OSW - Office of Solid Waste
OW - Office of Water
P2 - Pollution Prevention
P4 - Pollution Prevention in Permitting Program
PADEP - Pennsylvania Department of Environmental Protection (PADEP)
PBT - Persistent Bioaccumulative and Toxic (substance)
POTWs - Publicly Owned Treatment Works
PrintSTEP- Printers' Simplified Total Environmental Partnership
SAB - Science Advisory Board
SGP - Strategic Goals Program
SI - Sustainable Industry
SIC - Standard Industrial Classification
TBT - Tributyltin